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PATENT SPECIFICATION



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462,622

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Complete Specification Accepted: March 12, 1937.

PROVISIONAL SPECIFICATION

Improvements in Road Vehicles

I, JAMES PARKER GARNER, a Subject of the King of Great Britain, of 45, Priory Road, Kenilworth, in the County of Warwick, do hereby declare the nature of
5 this invention to be as follows:—

This invention relates to load-carrying road vehicles and is primarily applicable to the construction of relatively light vehicles such as delivery vans, light
10 lorries, or display vehicles.

The object of the present invention is to provide an improved construction.

According to one part of the present invention, I provide a floor frame or plat-
15 form, preferably having side boxes so as to form a permanent structure which is completed into a load-carrying body by using detachable units of various kinds according to the purpose for which the
20 body is built

The construction forming the subject of the present invention thus differs from the present general practice inasmuch as according to the latter it is usual to con-
25 struct a body separately and independently of the frame or platform, and then to deposit the completed body on to the frame or platform and to fasten it down thereon. On the contrary the method
30 according to the present invention is to provide a frame or platform preferably having side boxes, and then to erect upon this permanent structure, a body which is built up of standard units which are
35 manufactured in jigs so that fitting can be guaranteed without adjustments, these standard units, which may consist of panels, posts or other sectional parts of the body, being detachably secured to-
40 gether by readily detachable fastenings such as bolts or screws. With this arrangement quick assembly can be obtained, and further, in case of local damage any unit can be dismounted and
45 replaced by a new one in a minimum of time.

According to a further part of the present invention, I construct a frame or platform having a forward wide portion
50 extending between the front and rear wheels, and a rearward narrow portion extending between the rear wheels, the excess width at the front part being

employed to carry side boxes for the pur-
pose (in the case of a vehicle driven by an
internal combustion engine) of carrying a
fuel tank, battery and tools, and (in the
case of an electrically driven vehicle) of
carrying the batteries used for propulsion.
One advantage of providing the frame or
60 platform with side boxes is that they greatly increase the lateral rigidity of the body and prevent any bulging of the sides thereof.

In the former case the said boxes may
65 be provided with doors which may be either on the inner side or on the outer side, and in the latter case the doors will preferably be placed on the outer side so
70 that access can readily be obtained to the batteries.

In all cases the floor frame or platform will be placed at a low level preferably
75 lower than the axles of the rear wheels so as to increase the load-carrying capacity of the body by extending it downwardly as compared with those at present generally built.

By manufacturing a structure such as described, I am able to finish the body
80 according to the purpose for which the customer desires the vehicle.

For instance, if a light lorry is required, the body may be completed by providing
85 upper side panels, together with a tail-board which may be hinged if desired, and the tops of the side boxes may be fitted with inclined boards or plates so as to produce a body of hopper cross section.

Should the customer desire a body for
90 a delivery van, the transverse partition at the front may be provided with an opening at about the centre leading to a centre gangway, so that the driver can readily obtain access to the goods within the body
95 without walking to the rear and opening the rear doors. In such a construction the side spaces between the boxes and the roof, and between the frame or platform and the roof at the rear may be filled in
100 with units in the form of panels or pillars which can be readily fastened to the frame and the boxes, and the rear opening between the rear pillars may be filled with
105 a pair of rear doors, shutters or other type of standard construction.

In the case of a display vehicle, separate and detachable display cases for goods may be mounted on the tops of the side boxes, and these may be slidden into position and retained there by means of flexible straps or cords. In such a construction the sides of the vehicle immediately above the side boxes may be made of glass so that the contents of the show cases can be seen therethrough.

At the rear of the frame or platform a

transverse member is provided preferably extending to the full width of the wheels, and at the rear corners tool boxes or other compartments may be provided.

Dated the 1st day of November, 1935.

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COMPLETE SPECIFICATION

Improvements in Road Vehicles

I, JAMES PARKER GARNER, a Subject of the King of Great Britain, of 45, Priory Road, Kenilworth, in the County of Warwick, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to load-carrying road vehicles, and is primarily applicable to the construction of relatively light vehicles such as delivery vans, light lorries, or display vehicles.

The object of the present invention is to provide an improved construction.

According to one part of the present invention, I provide a floor frame or platform, preferably having side boxes so as to form a permanent structure which is completed into a load-carrying body by using detachable units of various kinds according to the purpose for which the body is built.

The construction forming the subject of the present invention thus differs from the present general practice inasmuch as according to the latter it is usual to construct a body separately and independently of the frame or platform, and then to deposit the completed body on to the frame or platform and to fasten it down thereon. On the contrary, the method according to the present invention is to provide a frame or platform preferably having side boxes, and then to erect upon this permanent structure, a body which is built up of standard units which are manufactured in jigs so that fitting can be guaranteed without adjustments, these standard units, which may consist of panels, posts or other sectional parts of the body, being detachably secured together by readily detachable fastenings, such as bolts or screws. With this arrangement quick assembly can be obtained, and further, in case of local damage any unit can be dismounted and replaced by a new one in a minimum of time.

According to a further part of the present invention, I construct a frame or platform having a forward wide portion extending between the front and rear wheels, and a rearward narrow portion extending between the rear wheels, the excess width at the front part being employed to carry side boxes for the purpose (in the case of a vehicle driven by an internal combustion engine) of carrying a fuel tank, battery and tools, and (in the case of an electrically driven vehicle) of carrying the batteries used for propulsion. One advantage of providing the frame or platform with side boxes is that they greatly increase the lateral rigidity of the body and prevent any bulging of the sides thereof.

In the former case, the said boxes may be provided with doors which may be either on the inner side or on the outer side, and in the latter case the doors will preferably be placed on the outer side so that access can readily be obtained to the batteries.

The invention still further provides a load-carrying road vehicle body comprising a platform or floor frame and side boxes of skeleton form, posts attached to the corners of the structure, a superstructure comprising sides, a roof, and a rear end built up of units detachably secured to said frame, boxes and posts.

It has previously been proposed to mount a vehicle body in a detachable manner on the chassis frame by providing brackets on the outside of the chassis frame and securing detachably to such brackets downwardly projecting parts of the body, such as the lower ends of the body pillars, so that the body could readily be removed to give easy access to the mechanism carried by the chassis.

In order that my invention may be clearly understood and more readily carried into practice, I have appended hereunto two sheets of drawings illustrating the same, wherein:—

Figure 1 is a view in side elevation

showing one form of vehicle, constructed in accordance with the present invention.

Figure 2 is a perspective view showing the frame.

5 Figure 3 is a section on line 3—3 of Figure 1.

Figure 4 is a view to an enlarged scale showing in section the construction at the sides of the vehicle.

10 Figure 5 is a section on line 5—5 of Figure 1.

In the construction illustrated, the load-carrying body is made separately from a detachable propulsion unit at the forward end, in accordance with my concurrent Specification No. 32835/35.

The frame illustrated in Figure 2 comprises main longitudinal members 1 which are of channel section. These are connected at intervals with cross members 2 which may also be of channel section.

Additional longitudinal members of channel section are provided, as shown at 3, and these are connected to the main longitudinal members 1 and transverse members or portions 4. The members 4 may either be formed as continuations of the members 2 or they may be made separately and riveted or otherwise secured to the members 1 and 3 by any of the well-known methods.

At the forward end additional longitudinal members 5 are provided, these having forwardly extending and upwardly cranked ends 6 for detachable engagement with the ends of longitudinal frame members on the propulsion unit.

At the rear end a transverse member 7 is used connecting the rear ends of the main longitudinal members 1 and the rear part of the frame may be stiffened by members 8 and 9 together forming a cruciform stiffener.

At these ends the member 7 may be provided with forwardly extending members or portions 10. These members 10 are in line with the members 3.

Superposed on the frame thus constructed are the frames of two side boxes. 50 These are preferably built up of metal members of light angle section. Each box construction comprises corner posts 11 connected at their upper ends by transverse members 12 and also having longitudinal members 13.

The main frame together with the side box frames forms a unit upon which can be erected any one of a number of different designs of load-carrying body 60 itself built up of units which are made in jigs in order to eliminate fitting.

In Figures 3, 4 and 5 I have shown an example of the body work. In Figure 3 the right-hand half is shown as a body for 65 display work, while in the left-hand half

is shown a construction suitable for a delivery van.

The units of which the body is built up include a pair of rear corner posts, one of which is shown at 14 in Figure 5. The 70 lower parts of these posts will lie against the two rearmost corner posts 11 and be secured thereto. Similarly, posts are provided secured to the forward corner posts 11. These forward corner posts are connected at the top longitudinally by rails 15 between which extend arch-shaped transverse members 16. There are also additional arch-shaped members 16 intermediate the ends of the body. 75

Secured to the inner sides of the rails 15 are longitudinal rails 17. 80

The space between the members 15 and the outer longitudinal members 13 and the end posts 14 at each side may be filled 85 by a panel 18 attached to a wooden frame 19. These panel units are made accurately to size in jigs and can be readily secured in place, the inner surface of each unit abutting at the top against one of the 90 rails 17 and at the bottom abutting against members 20 forming the roof of each side box.

Similarly, the top space is closed in by a panel 21 which is made accurately to 95 size and which is carried by the members 16 and 17.

Instead of forming the sides of the panels 18 the side spaces may be filled by glass windows, as indicated at 22 in 100 Figure 3, and detachably mounted within the vehicle and resting on the top of each side box there may be a show-case 23. Each show-case may be provided with one or more auxiliary supports 24 adapted to 105 rest on the flooring 25 and at the top each show-case may be provided with a number of hooks 26 detachably connected by straps 27 to hooks 28 carried by the rail 17. 110

The sides and ends of the side boxes are filled in by means of panels indicated at 29, and each of these panels may be made as a unit accurately to size and ready 115 for securing in position.

One side, either the inner side, as shown at 30, or the outer side, as shown at 31, may be adapted to be opened and closed by a hinged panel.

If the vehicle is driven electrically, 120 these side boxes may be used for carrying the batteries, and in such a construction, the side which can be opened is preferably the outer side. In the case of a vehicle driven by an internal combustion engine, these side boxes may be used 125 either for the carriage of fuel or oil or tools, and in such a case the inner side may be provided with the hinged panel.

At the front of the body a transverse 130

partition 32 is provided, and this may have an opening, as indicated in Figure 3, so that the driver can obtain access to the body without having to walk round to the back.

At the back the body may be permanently closed or the space between the two rear posts 14 may be adapted to be closed by a pair of hinged doors, one of which is indicated at 33. These doors may be hinged to the posts 14.

As indicated in Figure 1, the space to the rear of each side box contains a mudguard 34, the rear end of the mudguard being secured to the forward end of each of one of the members 10. The space above the mudguard is filled in by suitable panels, and to the rear of each mudguard there may be a small tool box, indicated at 35 in Figure 1.

The main frame or platform which carries the flooring 25 is preferably placed at a low level and preferably below the axles of the rear wheels.

The construction enables a standard design of frame and side box to be used to suit many needs, various forms and arrangements of superstructure being built upon these by selecting units to suit the purpose for which the vehicle is required.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to

be performed, I declare that what I claim is:—

1. In a load-carrying road vehicle, a floor frame preferably having side boxes forming a permanent structure and a superstructure consisting of detachable units of various kinds to suit the purpose for which the body is required.

2. In a load-carrying road vehicle, a body construction comprising a frame or platform having a forward wide portion extending between the front and rear wheels and a rearward narrow portion extending between the rear wheels, the excess width at the front part being employed to carry side boxes.

3. A load-carrying road vehicle body, comprising a platform or floor frame and side boxes of skeleton form, posts attached to the corners of the structure, a superstructure comprising sides, a roof, and a rear end built up of units detachably secured to said frame, boxes and posts.

4. A load-carrying road vehicle body, according to any of the preceding Claims, substantially as described and illustrated in the accompanying drawings.

Dated the 17th day of December, 1936.

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[This Drawing is a reproduction of the Original on a reduced scale.]

FIG. 1.

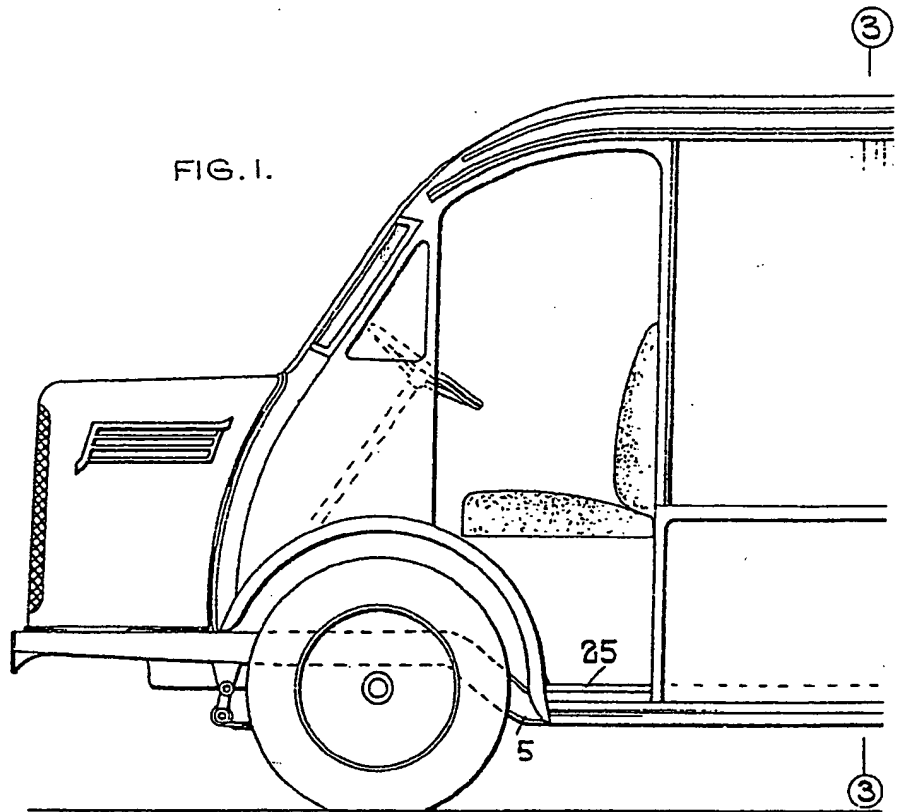
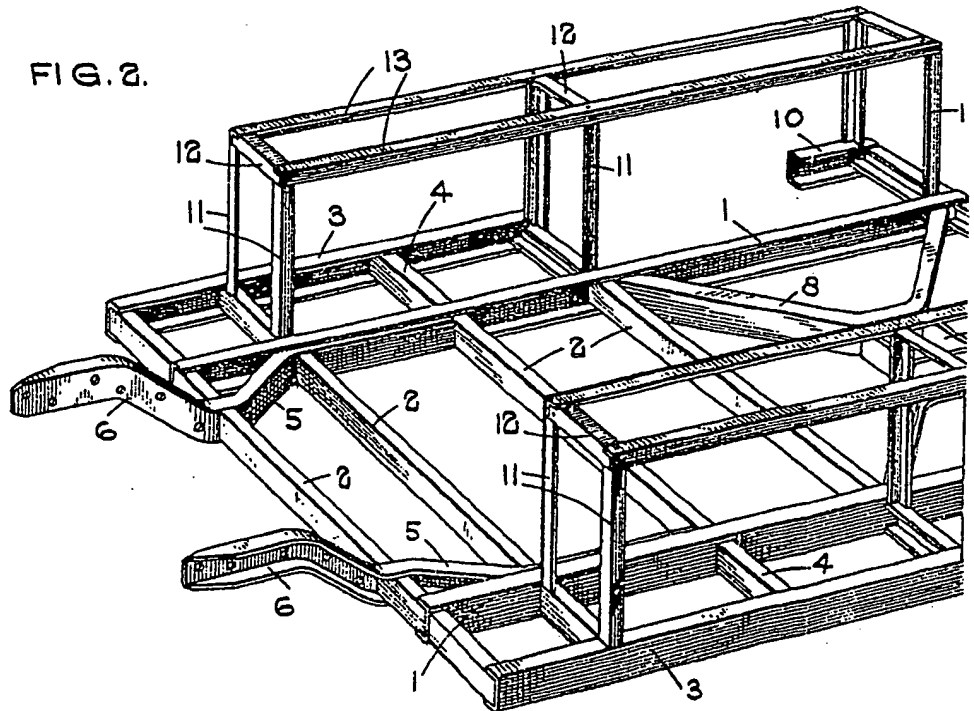
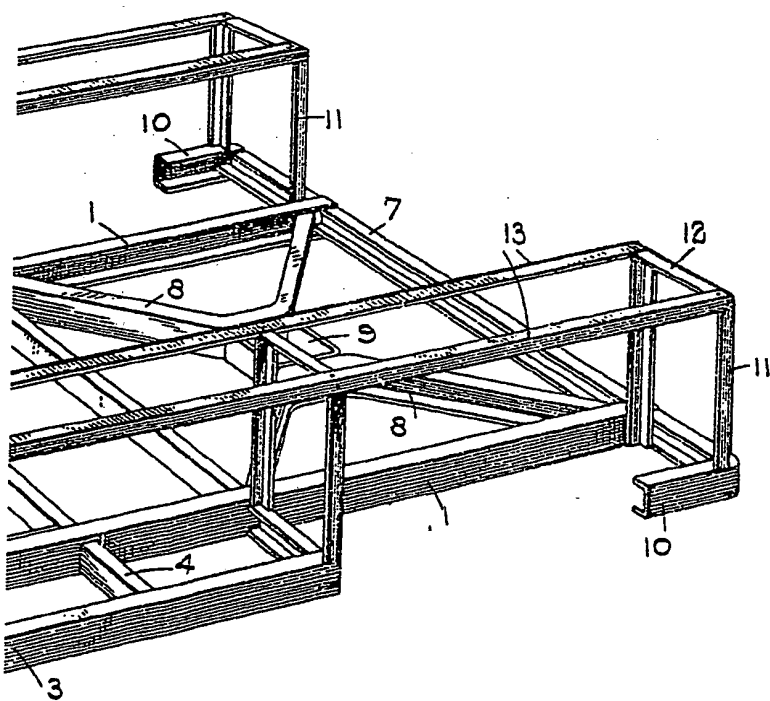
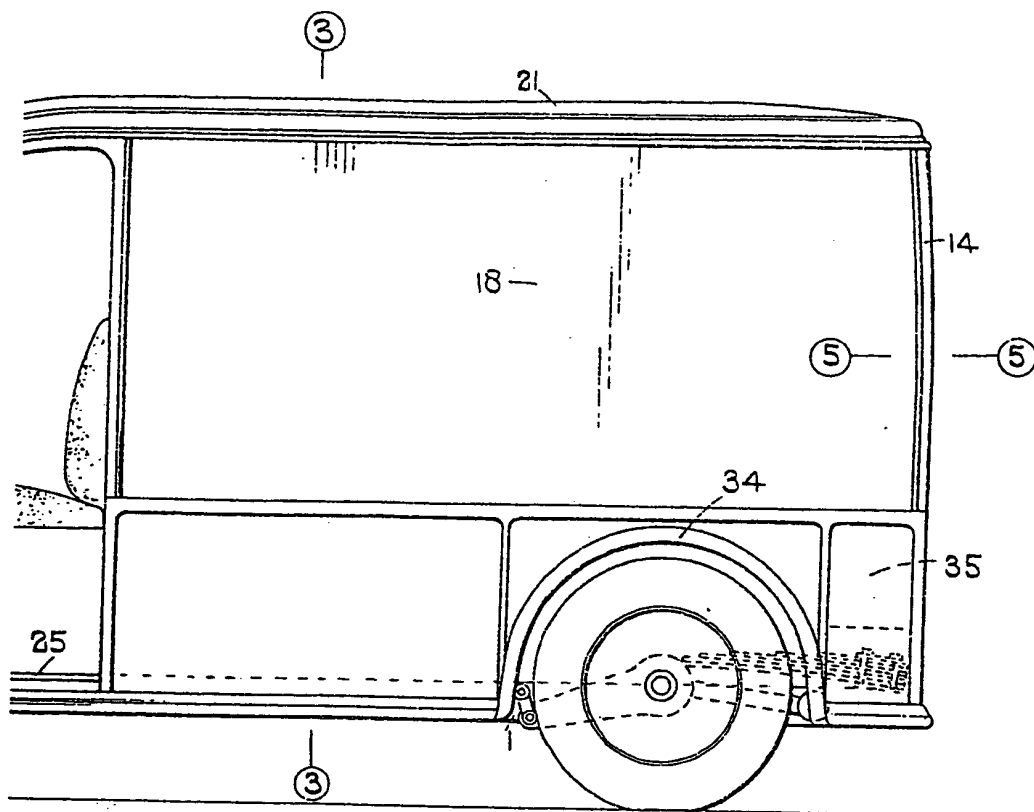


FIG. 2.





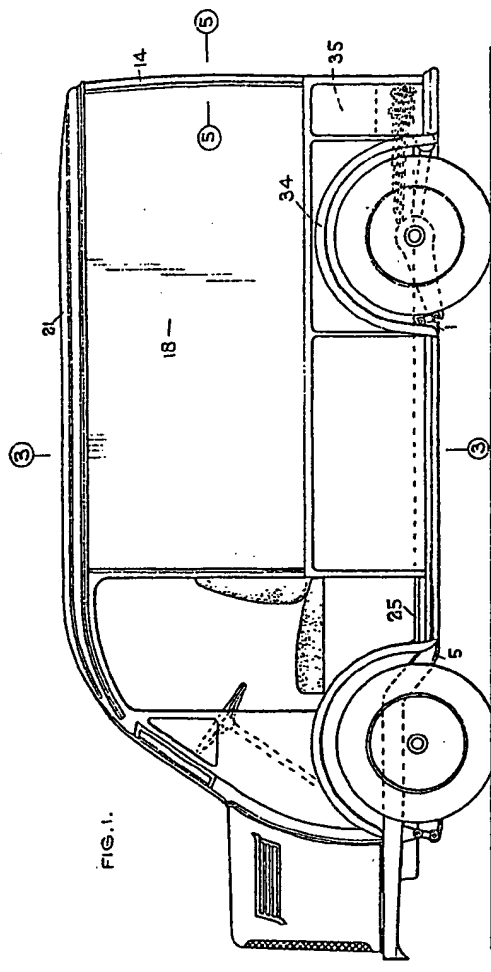


FIG. 1.

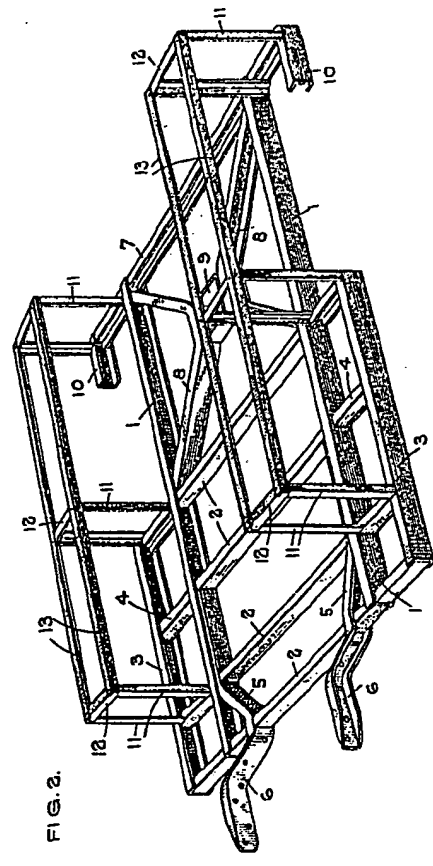
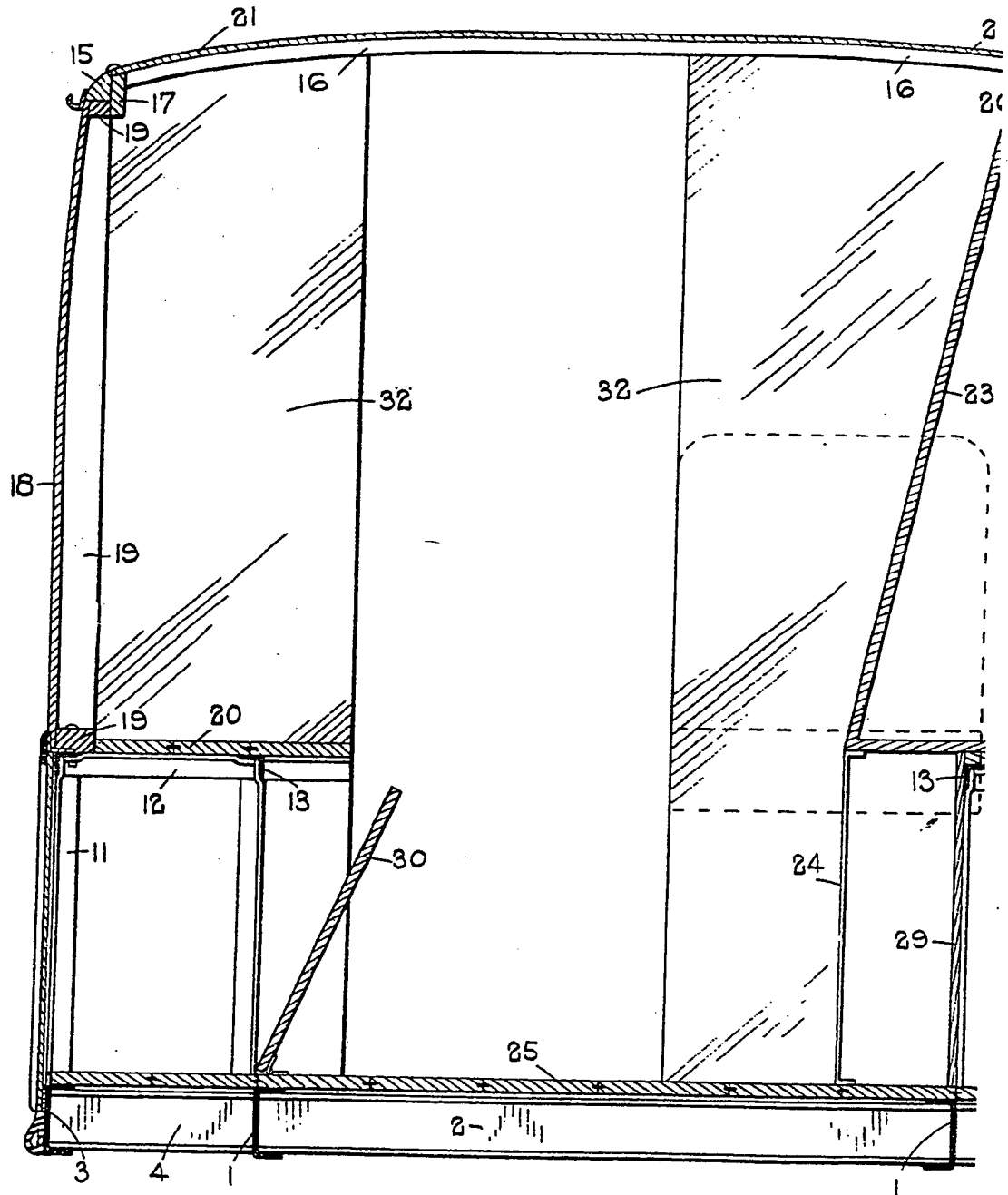


FIG. 2.

[This Drawing is a reproduction of the Original on a reduced scale.]

FIG. 3.



[This Drawing is a reproduction of the Original on a reduced scale.]

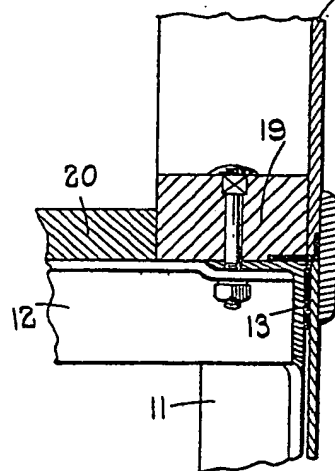
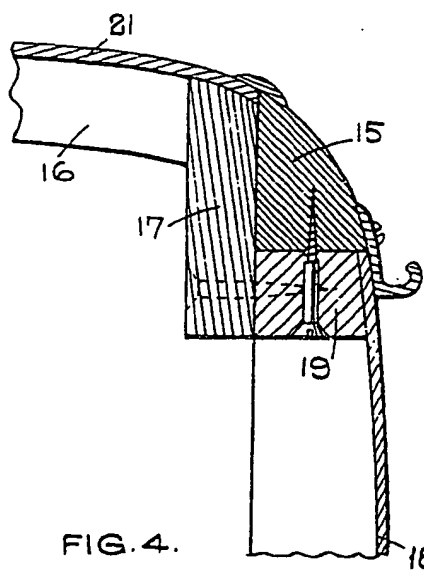
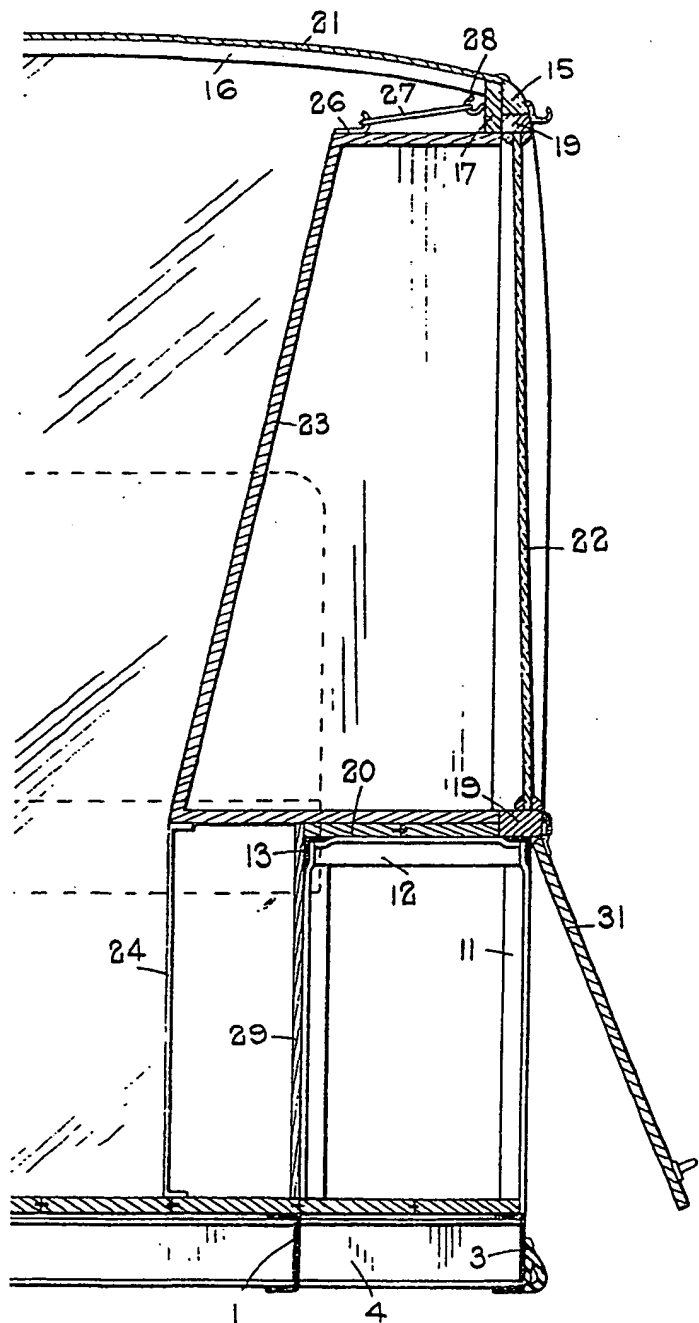


FIG. 5.

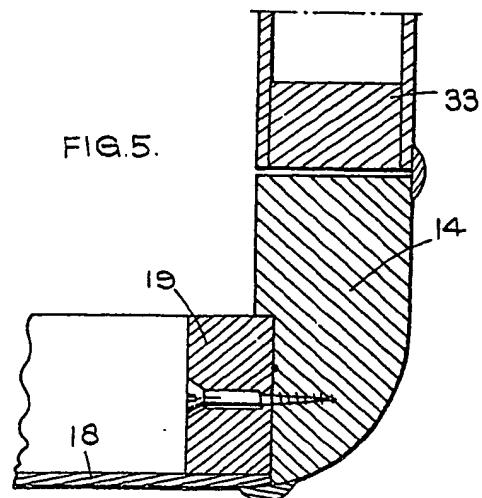


FIG. 3.

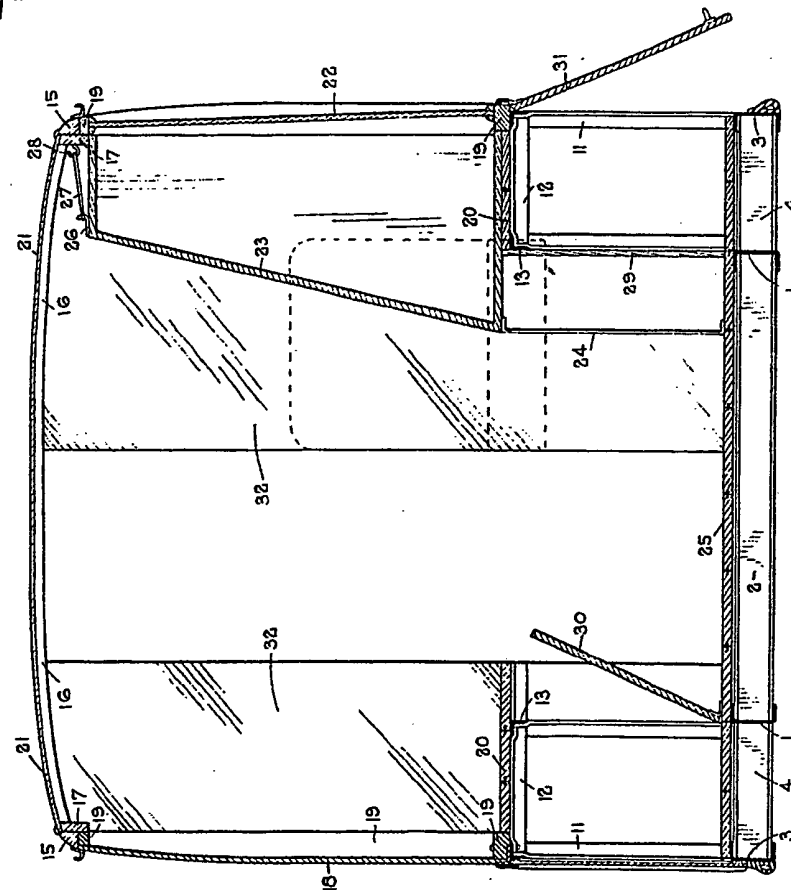


FIG. 4.

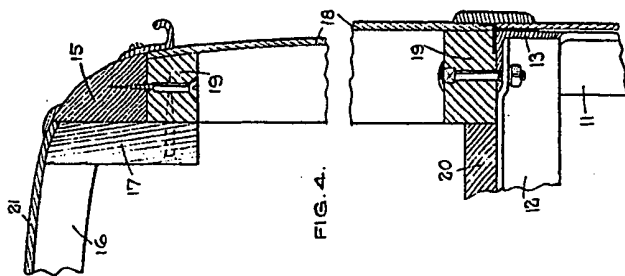
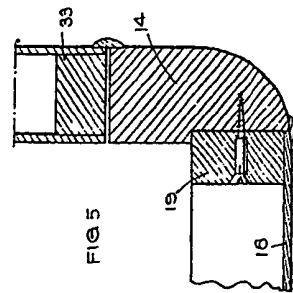


FIG. 5.



[This Drawing is a reproduction of the Original on a reduced scale.]